V. Conclusions

A. Overview of MTG's Findings

Table 5, on page 43, summarizes MTG's evaluation of the eight primary Line Sharing OSS issues raised by the ILECs in their filing.

B. Conclusions Reached by MTG

ILEC OSS changes required to incrementally support CLEC-ILEC ADSL Line Sharing are minimal in nature rather than massive and all encompassing as some ILECs have portrayed them. Most of the OSS functional requirements that were identified pre-date Line Sharing and are required for the ILECs' own ADSL offerings, their obligation to provide UNEs or other requirements such as activities to support mergers and/or 271 applications. Evidence of this includes:

1. Many of the underlying issues have some merit as requirements for Line Sharing; however, the same issues must be overcome for other ILEC purposes including the provision of their own ADSL services either directly or through an arms-length subsidiary and their obligation to provide UNEs to CLECs.

2. In several cases, the ILECs appear to have overlooked or intentionally omitted the exploration of modest changes and extensions of current approaches and OSS functionality in favor of trying to justify entirely new OSS development efforts as solely driven by Line Sharing (such as BellSouth's proposed new SDM-based inventory system).

3. In the case of Bell Atlantic, it appears that the company has already ordered and received from Telcordia, upgrades to the LFACS OSS that allow it to inventory, assign and track a voice service and up to four other services on one loop. This apparently was done to support its own tariffed ADSL services but has the functionality that several ILECs identified as a requirement for CLEC-ILEC Line Sharing. Since the new ADSL releases for LFACS and related systems were delivered in the May to June 1999 timeframe, the team finds it curious that no mention was made of these developments in any of the ILEC's June and July filings.

4. The timeframe to prepare ILEC OSS to handle CLEC-ILEC Line Sharing has been estimated at one year by Sprint[49], 1.5 to 2 years by SBC[50], 2 years by Ameritech (after industry standards were agreed to)[51] and 3 to 5 years by BellSouth[52]. Since the functionality is largely existing, it is our opinion that work-arounds could be in place immediately with 2 to 4 weeks required for implementation and ILEC staff training. The few minor incremental upgrades, primarily for ordering, could be formally completed over the next 3 to 12 months. This

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[49] Sprint 7/22/99 filing at p. ii

[50] SBC 6/15/99 filing at p. 21

[51] Ameritech 6/15/99 filing pp. 8-9

[52] BellSouth 7/22/99 filing at p. 26 footnote 57

timeline is substantiated by Bell Atlantic in its 271 filings in Massachusetts and Ameritech/SBC's in their merger filings to the FCC.

5. The cost estimates submitted by ILECs for making OSS upgrades to support CLEC-ILEC Line Sharing ranged from GTE's "five million dollars"[53] to U S West's "significantly more than the $5 million figure put forth by GTE"[54] to SBC's "hundreds of millions"[55]. Most of the functionality already exists and is used for DAML, UDC and ADSL today. In the case of Bell Atlantic, it has even been enhanced further with recent upgrades to LFACS, SOAC, SWITCH, NSDB, NCON and Delivery by Telcordia. Based on these combined factors, the cost for incremental Line Sharing upgrades will be much closer to and certainly no more than GTE's estimate of $5 million nationally rather than SBC's estimate of hundreds of millions. That is just plain excessive with no substantiation.

6. Testing access is an issue that is dependent on determination of a standard reference configuration for ADSL Line Sharing that determines the location and control of passive splitters. In the mean time, existing ILEC metallic testing capabilities can be used during the process of installation of ADSL on the shared line and CLECs could work jointly with ILECs to request metallic tests during maintenance and repair.

7. The broad sweeping issues raised by the ILECs and the lack of specificity about what new functionality they need combined with our understanding of their current OSS capabilities, lead us to the conclusion that many issues raised and remedies are overstated to deter the FCC from mandating Line Sharing.

8. Based on review of the white paper entitled *Telecordia's Proposed OSS Solution for SBC Line-Sharing Needs* contained in the recent SBC/Telcordia Ex Parte filing[56], the Telcordia solution appears to merely be a more "elegant" version of our work-around approach. The biggest difference is that our approach can be implemented immediately while they claim that their approach will take 15 months. The planned enhancements sound similar in nature to the work that Telcordia did for Bell Atlantic's upgrades for its own line sharing services. It appears that SBC needs this type of upgrade for its own requirements and the enhancements are complementary with our recommended work-arounds. The Telcordia/SBC filing in no meaningful way alters our findings and recommendations.

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[53] GTE 6/15/99 filing at pp. 28-29

[54] U S West 7/22/99 filing at p. 27

[55] SBC 6/15/99 filing at p. 21

[56] Lincoln E. Brown letter to Magalie Roman Salas regarding CC Docket No. 98-147, 9/23/99

Table 5 - Summary of Findings

Concern	Proposed Approach	Work-Around Effort/Timeline	Formalization Effort/Timeline
1. No way to order shared loop	Assign codes (which does not involve OBF), use new paper form and manual fax procedures established for UNEs until OBF standardizes across ILECs. Then update GUI, EDI and fully implement.	Incremental rather than major new development. 1 to 2 weeks to modify forms and/or develop manual procedures	Present to OBF; Update Web GUI in 3 months; Update EDI standard in 6 months; Fully implement EDI is less than 12 months
2. No way to provision two services on one loop	Train employees on applicability of existing ADSL inventory and assignment capabilities Line Sharing; assign new equipment codes if required, using existing process	Immediate implementation with 1 to 2 weeks to train staff on use of existing process for CLEC-ILEC Line Sharing	Nothing Required
3. No way to track two addresses, customers and service providers on one loop	Address is same. Customer and service provider can be tracked and cross-referenced.	Immediately available by building on Work-Arounds in #1 and #2 above so requires 2 to 4 weeks cumulatively.	Small – may need to add field to house CLEC ID and new ID; driven by ILEC needs
4. No way to notify both CLEC and POTS customer of problem on loop	Approaches detailed for issues 1, 2, 3 will support tracking customer info for reference	Immediate Work-Around available from activities 1 through 3 – so within 2 to 4 weeks cumulatively for ILEC training.	See 1,2, and 3 above
5. No way to perform routine automated testing without disrupting other service	Notify customer of possible service disruption during testing; Provide physical testing access once splitter in place that is usable by CLEC OSS in one of ways suggested	Immediate Work-Around since customer can be notified at time of shared sale.	OSS effort is low, process and procedures effort is medium once splitter available.
6. Shared loops will create twice the number of trouble tickets	May be fewer tickets so not clear if ILEC supposition is true. If so, existing ILEC OSS have ability to correlate duplicate related trouble tickets.	Nothing required	Little or no OSS impact
7. Shared loops will present repair and maintenance problems	New scenarios are similar to elements of other existing scenarios. Collaboratively revise existing processes and procedures.	Immediate collaborative revision as soon as logistics permit, no pre-requisites	Primarily a process and procedure issue, not an OSS functionality issue
8. No way to bill both customers on one loop	Establish POTS customer with TN, CLEC customer with Ckt ID and cross-reference. May require new USOCs, codes, use of existing logic.	Immediate Work-Around with 3 to 4 weeks to assign new codes if required	Primarily uses existing capabilities, may vary by ILEC – but definitely minor not total re-do

C. A Phased Approach to CLEC-ILEC ADSL Line Sharing Ordering and Provisioning

The ILECs and CLECs could work together to implement a phased implementation of CLEC-ILEC Line Sharing that might use the following approach:

1. ILECs could immediately extend the manual processing and provisioning procedures used today for their own ADSL services to support CLEC orders for shared lines. This will require 2 to 4 weeks for implementation and ILEC staff training.

2. ILECs and CLECs could work collaboratively to expeditiously agree on any minor changes to forms and formats and submit to the OBF as appropriate.

3. ILECs could incorporate changes into Web GUI interfaces over the next 3 months or so while manual procedures are in place.

4. ILECs could incorporate changes into EDI standards over 3 to 6 months.

5. ILECs could implement full EDI for Line Sharing in 9 to 12 months.

6. Both ILECs and CLECs could work towards flow-through provisioning for Line Sharing orders which should be available for CLEC Line Sharing orders when ILECs are able to do it for their own ADSL or shortly thereafter.

D. Validation of the Timeline

In attempting to test this timeframe without having all of the necessary details to finitely validate it, it was helpful to refer to the SBC/Ameritech Ex Parte filing made in a letter to Ms. Magalie Roman Salas, FCC Secretary dated August 27, 1999. In that filing, concerning conditions for approval of their merger, SBC/Ameritech proposes to establish separate, arms'-length affiliates that will provide all advanced services, including shared-line DSL to retail and wholesale customers. The affiliate will provide shared-line ADSL services using unbundled shared-loops provided by the ILEC; the ILEC will provide the POTS voice service and the affiliate the ADSL service on the same loop. Because the proposed affiliate is by design indistinguishable from a competitive LEC providing advanced services, and the provision of a shared-line loop element to that affiliate is indistinguishable from the obligation under consideration in the *Advanced Wireline Services* proceeding, SBC/Ameritech's proposal to implement line-sharing with the affiliate immediately upon completion of the merger demonstrates that there are no significant cost or timing barriers to implementation of competitive line sharing. SBC/Ameritech's proposal to implement line sharing with the separate affiliate immediately validates the conclusions in this affidavit that competitive line sharing can be implemented at nominal cost and with little delay.

Since that is a much larger undertaking with a much broader scope, it serves to strengthen our view on the reasonableness of the above Line Sharing approach and schedule and further confirms the excess we believe is present in the ILEC estimates referred to in conclusion #5 on page 42.

Further evidence of the feasibility of this timeline is provided by Stuart Miller, on behalf of Bell Atlantic, in his affidavit to the Massachusetts Department of Telecommunications and Energy on OSS capabilities in support of the company's 271 application. Mr. Miller states "The Web GUI, which has been available from BA-MA since October 1996 for Resale and January 1997 for UNEs, provides Competing Carriers with the same functionality available to BA-MA retail

employees using graphical user screens, displayed directly on their desktop computers, to enter and send requests to, and review responses from, BA-MA's OSS."[57] Since the FCC's First Local Competition Order[58] released on 8/6/96 and the Second Order on Reconsideration[59] released on 12/13/96 were the orders driving the provision of OSSs for UNEs and Bell Atlantic was able to respond to that order in somewhere between 3 weeks and 4 months (depending on when it started development) with a new UNE GUI, making minor modifications in less than 3 months is more than reasonable.

As a final comment, it is interesting to note that according to a recent Portal Software Inc. press release[60], U S West selected Portal's software for the "business infrastructure for U S West MegaBit Services, the nations' most popular DSL high-speed Internet service. ...Portal delivered a full production customer management and billing system to support U S West's introduction of the MegaBit services in only five weeks...".

This is evidence that significant progress can be achieved when ILECs embrace an idea and enlist the aid of aggressive innovative new suppliers.

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[57] Stuart Miller Affidavit of 5/17/99 page 5 paragraph 9

[58] First Report and Order, FCC 96-325 (released 8/6/96)

[59] Second Report on Reconsideration, FCC 96-476 (released on 12/13/96)

[60] Dated 9/9/99 in Cupertino CA

Appendix 1

Résumé - DENNIS J. AUSTIN

As vice president with Maxim Telecom Consulting Group, Dennis Austin provides direction and insight to the firm's telecommunications network consulting activities. These activities include the analysis and design of networks and systems for new market entrants; large, rapidly growing carriers; and well-established carriers. In addition to these core areas of responsibility, Dr. Austin provides direction and support for consulting activities supporting Clients involved in regulatory proceedings and litigation.

Dr. Austin's specific project experience includes the following:

- For one of the top three national telecommunications providers, provided an assessment of the strengths and weaknesses of its network technology and its network operational support systems.

- Led the team that provided "telecommunication's expert services" for a major national long distance carrier involved in a several hundred million-dollar litigation related to the accuracy and timeliness of its billing process. As part of this effort, I directed the production of a Rule 26 Report, and had my deposition taken.

- Led the team that provided "telecommunication's expert services" for a major national telecommunications service provider involved in a multi-million dollar litigation related to the provision of wholesale carrier services to a multi-level marketing telecommunications reseller. As part of this effort, I directed the production of a Report, and had my deposition taken.

- Led the team that provided "telecommunication's expert services" for a major national telecommunications service provider involved in an over one billion dollar litigation with another major telecommunications service provider related to the delivery of reasonable telecom access services. As part of this effort, I directed the development of network economic models.

- For a major Canadian Telecommunications company, assisted in the development of an economic model for its planned entry into the local telecommunications market.

- Provided the technical direction in a long-term engagement for a competitive European carrier to significantly improve the operating and capital efficiency of its core network. Project scope included the assessment of the network architecture, both switching and transmission, and the development of specific recommendations to bring about major improvements to support strategic business objectives. Presented recommendations to carrier's senior management and obtained their support for a major transition in the network's architecture.

- Led the team that developed a comprehensive business plan for an international interexchange carrier's entry into competitive long-distance market. Personally contributed to the development of the high level network design that supported an advanced set of products and services using digital switches, SS#7 signaling infrastructure, and stand alone Service Control Points. Business plan supported a several-billion-dollar investment.

- For a regional fiber optics based carrier, performed an audit of the network's transport design. Offered several recommendations for improvements in utilization and resiliency to failures of different types.

- Assessed the developing demand for intelligent network services to determine the demand for equipment, processing, and software; identified architectural and performance requirements; evaluated competitor products and assessed client's products; and analyzed possible market entry strategies.

- Developed strategic and business plans for an independent telephone company's new fiber-optic network venture.

- Made presentations to the competitive IXCs and their vendors on the business and network architectural impacts of new switching and transmission technology as well as the affects of new local access rate structures.

- Directed a major study for a utility company association of over 2,000 members of strategies available to electric and power utilities pursuing fiber-optic ventures throughout the United States.

- Led the long-term design effort (fundamental planning) for a national IXC, including the development of a demand analysis model and a computerized capacity-planning model.

- Developed a business plan, including technology assessment, for an independent telephone company considering entry into wholesale operator services.

Before joining MTG, Dr. Austin served as a vice president with SFCG/KPMG Peat Marwick LLP's Telecom Practice and previously as Director of Switch Engineering, Network Planning, and Design for GTE Sprint. He has also served as vice president of Engineering and Operations for Dataspeed, Inc., and spent eleven years at Bell Laboratories where he contributed to the development of non-hierarchical traffic routing algorithms and other switch network and systems projects. At Sprint, Dr. Austin oversaw the growth of the company's network from its first switch to nearly 80 switches operating in a three-level hierarchical network. He was responsible for all engineering-related product planning and development for switched services, including switch requirements, network control systems and plans for transmission and switch facilities.

Dr. Austin holds a Ph.D. in electrical engineering from Stanford University.

Appendix 2

MTG Qualification Highlights

Maxim Telecom Consulting Group (MTG) was established to provide management consulting services in support competitive telecom market participants. MTG's core team of professional consultants has acquired extensive experience in business, regulatory, legal, network, information systems, and business process issues facing telecom service providers. MTG is familiar with CLEC facilities based, resale and UNE approaches to providing services, and is knowledgeable on the network technologies, business processes and systems issues and solutions associated with each. In particular, MTG is familiar with RBOC loop plant issues, and is familiar with standard and non-standard approaches to Pre Ordering, Ordering and Provisioning of RBOC UNEs. MTG gained a broad and deep understanding of this subject area working with CLECs, beginning in 1994. For the past 18 months MTG has conducted engagements that have extended this network and OSS knowledge to include a detailed understanding Digital Subscriber Line (DSL) architecture, technology, and Operations Support Systems.

MTG professional staff members have a long track record of successful engagements with telecom clients in North America, Europe, and the Pacific Rim and are proud that their recommendations and advice to clients have helped to shape the industry. Each of MTG's professional staff of industry experts has in-depth experience with a broad set of telecom industry issues, particularly the exchange of required information between ILECs and CLECs.

The MTG core team represents over 100 years of combined experience in various areas of operations and business support systems for local and long distance carriers. This multidisciplinary team in the following selected relevant engagements:

- Evaluated alternative architectural strategies for deployment of xDSL, VoDSL and VoIP for a Pacific Rim carrier
- Developed functional requirements for xDSL/Converged Network Services Provisioning for a U.S. systems vendor
- Assisted with the overall test design, developed testing scenarios and prepared test transactions for Public Service Commission supervised Third Party Test of ILEC OSS on the East Coast
- Developed the detailed architecture and high-level functional specification for a consortium planning to build and operate an ILEC-CLEC industry standard interface OSS gateway
- Developed the business and technical architecture and processes for a national long distance carrier entering the local services market in the U.S.
- Defined the application and systems architecture for an early CLEC entrant in the U.S.
- Served as subject matter experts providing testimony in regulatory hearings on behalf of CLEC clients

Brief Résumés of MTG Other Evaluation Team Members

JACK R. BOHEIM

Jack Boheim has specialized in the strategic application of information technology to telecommunications. Mr. Boheim's expertise represents 25 years of strategic planning and implementation of information technology in telecommunications, during which he has been responsible for all aspects of telecommunications systems business strategies, planning, design, development, procurement, implementation, and operation. Mr. Boheim has directed recent engagements for North American, European, and Pacific Rim carriers focused on the provision and management of new services including the development of broadband products for local access networks.

Prior to joining MTG, Mr. Boheim previously held director positions with KPMG, SFCG, and Andersen Consulting, executive director positions with an RBOC, and system development positions with Bell Telephone Laboratories and AT&T. Mr. Boheim holds a B.S. degree in electrical engineering from the University of Wisconsin. He also has extensive professional education from the Harvard Business School, the University of Pennsylvania, Stanford University, and the University of California.

ROBERT M. CENTER

Bob Center has extensive experience working with major network operators and suppliers on various aspects of network systems, Operations Support Systems (OSS), and product and service development. Mr. Center's expertise represents 22 years of planning and implementation of telecommunications network infrastructure systems and information technology systems, including broadband access networks and supporting OSS. Mr. Center's areas of expertise include systems requirements analysis; system design; project, engineering, and operations management; business and technical planning; and software specification and design.

Prior to joining MTG, Mr. Center held senior manager positions with SFCG and worked for five years at US Sprint, where he managed the implementation and operation of the Western Region Control Center (WRCC) (which was duplicated in the central and eastern regions). In this capacity his organization was responsible for Network Management functions including switch and transmission surveillance and repair for eleven western states. The WRC also provided network management of international gateways connecting overseas via undersea cable and satellite. While at US Sprint he also managed specification and external design of call-processing software for large digital switching systems. Mr. Center has B.S. and M.S. degrees in engineering from Stanford University.

RICHARD W. SCHWARTZ

Richard W. Schwartz has 20 years of experience in the telecommunications industry working with major network operators and suppliers. This experience includes various aspects of network systems development, BSS and OSS development, local access network architectures for classic narrowband and converged broadband networks, customer care systems, and network services development. Mr. Schwartz's contributions include systems requirements analysis, system design, project management, engineering management, and business and technical planning.

Prior to joining MTG, Mr. Schwartz held senior consulting positions with KPMG and SFCG; a marketing position with Tandem Computers; management and senior engineering positions with Sprint, and an engineering position with DSC Communications.

Mr. Schwartz has a B.A. degree in comparative religion and philosophy from Stanford University, and an M.A. degree in comparative psychology from the California Institute of Asian Studies.

DENISE L. ANDERSON

Denise Anderson has over 20 years of experience working with corporate, small business and start-up telecommunications firms including wireline and wireless network operators, enhanced service providers and suppliers. Ms. Anderson's areas of expertise include intelligent network design, traffic engineering, service management, operations support system (OSS), training and business development with a technical emphasis.

Prior to joining MTG, Ms. Anderson served as Vice President of Network Operations for a wireless enhanced services provider. She also has extensive consulting experience as an independent based in Singapore, as a partner in a small specialty consulting practice in the United States and as an associate with SFCG. Other experience includes positions of increasing responsibility with Pacific Bell, New Jersey Bell, and GTE and US Sprint. She was co-inventor on a domestic and international patent and has contributed to industry publications and fora. Ms. Anderson has an A.S. degree in business from Charter Oaks College and a Certificate in Management from San Jose City College.

Appendix 3

Overview of Typical ILEC OSSs

ILECs have extensive OSS functionality to support retail and wholesale operations, including sales, pre-ordering, ordering, provisioning network and services, management and billing. These OSS are functionally similar across ILECs. A subset of the OSSs listed below, or others with very similar capability, are typically used for these functions. The specific systems vary from ILEC to ILEC, as does the specific functionality available in different versions of the same OSS. However, a baseline functionality that supports their current products and services, including ADSL services, is common across ILECs.

Pre-Ordering

The Pre-Ordering function includes the exchange of information between CLECs and ILECs required to allow the CLEC to prepare and transmit a complete and accurate order to the ILEC.

- Premises Information System (PREMIS) is a stand-alone component of the Facility Assignment and Control System (FACS). It provides address verification, telephone number assignment and other support during service negotiation.
- Service Order Processor (SOP) provides due date commitments for reference during negotiation
- Service Order Retrieval and Distribution (SORD) another service order processing system used by some ILECs
- Direct Order Entry System (DOE) identifies service and feature availability by end office.
- Customer Record Information System (CRIS) maintains customer service information records
- Carrier Access Billing System (CABS) sometimes used to maintain unbundled network element (UNE) customer service records
- Systems to support loop qualification which vary from ILEC to ILEC
- Systems for directory listing support which vary from ILEC to ILEC
- Work Force Automation (WFA) systems which maintain installation status

Ordering

The Ordering function involves the actual transmittal of a service order from the CLEC to the ILEC.

- Orders are transmitted using paper faxes, Web GUIs and /or EDI gateways that vary from ILEC to ILEC
- Faxed orders are manually input by ILEC staff
- Once orders are received electronically at the ILEC and/or input to the ILEC systems, then SOP, SORD, Service Order Analysis and Control (SOAC) and similar OSSs check, acknowledge and process the actual order.

Provisioning

The Provisioning function includes the assignment and installation of the service and the exchange of errors, corrections, inquiries, and status information between the ILEC and CLEC.

- SOAC controls the various provisioning functions required for the service order. It initiates requests for assignments needed for the service to LFACS, COSMOS, SWITCH, MARCH, TIRKS and WFAC or similar systems.
- Loop Facilities and Assignment Control System (LFACS), a sub-system of FACS, inventories local plant facilities and responds to SOAC assignment requests for service orders.
- Computer System for Mainframe Operations (COSMOS) provides assignments of office equipment and frame terminations for the service order.
- SWITCH inventories and assigns end office facilities that connect the outside plant facilities to the switch. SWITCH is a replacement for COSMOS.
- Memory Administration for Recent Change History (MARCH) handles the translation updates to the local class 5 switch to activate, deactivate or change telephone lines and features.
- Trunk Inventory Record Keeping System (TIRKS) inventories and assigns interoffice trunking facilities, special service circuits and UNEs.
- Network and Services Database (NSDB) stores in-effect and pending POTS, carrier, special services, message trunk, and customer circuits data. It also maintains measurement data for installation and maintenance activities.
- Network Configuration Management System (NCON) is a newer network inventory, design and assignment system for managing equipment, facilities and circuits for ADSL, ATM and Frame Relay.
- Work Force Administration and Control (WFAC) automates the coordination and tracking of integrated installation and maintenance activities.

- Delivery is a newer programmable workflow management engine that supports a wide range of services using network element intelligence and inter-operability among multiple management systems.

Maintenance and Repair

Together Maintenance and Repair functions are required to assure service once it is installed.

- Loop Management Operation System (LMOS) maintains the line record database, automatically tests the circuits, and determines which technicians are available when repairs are necessary.
- Mechanized Loop Testing System (MLTS) provides testing and trouble isolation on POTS, ISDN, and xDSL circuits through analysis of both metallic and digital problems.
- Integrated Test System (ITS) automates the testing of ISDN, analog and digital special services through interfaces with multiple vendor testing systems.
- Switched Access Remote Testing System (SARTS) supports remote testing for special services.
- Provisioning-oriented OSSs, such as NSDB and WFAC, also assist in the service assurance function.

Billing

- Billing Systems generate the monthly customer invoices for most products and services and tend to vary somewhat from ILEC to ILEC.
- CRIS, CABS and other specialized systems also play a role in the billing process through their maintenance of the customer service record.

Appendix 4

Summary of Issue Identification Process

To facilitate our evaluation, MTG summarized the issues as shown in Table 6 – *OSS Issues Raised By ILECs Concerning Line Sharing*, on the following page. Based on our knowledge of ILEC and CLEC business processes and systems, we then related the "raw" issue to specific functions and OSSs. Column A contains MTG's paraphrased description of statements made by the ILECs in the previously footnoted filings. Column B contains MTG's attempts to restate these issues as potential implied functional challenges to be addressed. Column C contains an estimate of which ILEC OSSs are typically related to that function and may or may not be impacted.

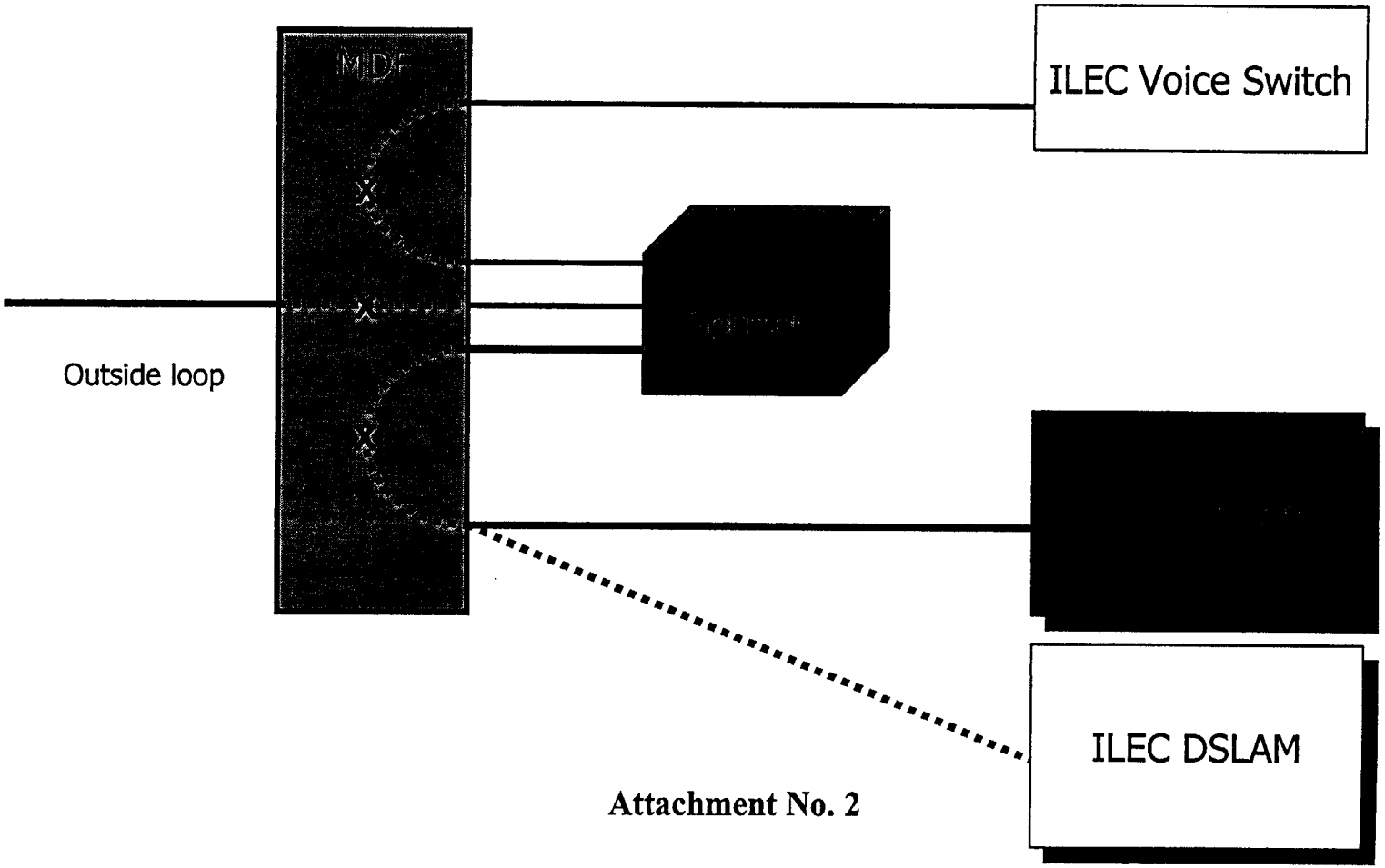
It is important to note that not all ILECs use all of the specific OSSs listed. However, most of the largest do use a core subset and those that do not have other systems with similar functionality.

Table 6 - OSS Issues Raised By ILECs Concerning Line Sharing

A - Issues Raised in ILEC Filings	B - Potential Business Functional Impacts	C - Related OSS
• There is no OBF standard ordering process or form for shared unbundled frequencies on local loops	1 - There is currently no way to order shared unbundled frequencies through the CLEC-ILEC automated EDI interface or manually	ILEC EDI, ILEC GUI, SOAC
• No ability to show multiple services on one loop • Loops are inventoried as one element • Need to treat shared loops similarly to a T-1 • Loop conditioning tracking and coordination present a problem	2 - There is no way to provision (inventory and assign) two services on the same loop	SOAC LFACS NSDB NCON
• No ability to track two customers on one loop -end-user and CLEC • No ability to track two service providers on same loop – CLEC and ILEC • No ability to show multiple service addresses	3 – There is no way to track two addresses, two customers or two service providers using the same loop	CRIS, CABS SOAC, LFACS, TIRKS NSDB
• No ability to link TN and circuit ID on one loop • Need to know CLEC is sharing line	4 - There is currently no way to notify both the CLEC and POTS customer of a condition on the loop that may be affecting their service	SOAC, LFACS CRIS, NSDB, WFAC
• Automated testing systems will not work on shared loops • Testing on one service will disrupt the other • If testing capability is integrated in the DSLAM then either the ILEC or CLEC does not have access	5 - There is no way to perform routine automated testing and on demand testing of one service without disrupting the other service	MLT ITS LMOS NSDB
• Need to avoid duplicate trouble tickets	6 - Loop failures will create twice the number of trouble tickets	LMOS
• Trouble isolation and repair will be more difficult on shared loops due to complexity • It will take more time to isolate faults and return failed lines to service • Need to know the DSLAM equipment type used by the CLEC • There is no way to provide for repair and maintenance on a shared loop	7 - Repair and maintenance will present problems on shared loops	NSDB LMOS MLT ITS SARTS
• No billing code for data functionality on voice loop • Need two carriers on billing • Need completely new billing system	8 - There is currently no way to bill both the CLEC that orders "data functionality" and the POTS customer for voice on a shared loop	Billing

Line-share CO operations

- Operationally identical to ILEC implementation of its own ADSL offering



Attachment No. 2